CONTENTS

PART 1. FEBRUARY

PAGE

DAWSON, G. W. P., and SMITH-KEARY, P. F. (Dublin). Episomic control of mutation in *Salmonella typhimurium* 1

WOODWARD, VAL W., and DAVIS, ROWLAND H. (Houston and Michigan). Coordinate changes in complementation, suppression and enzyme phenotypes of a *PYR*-3 mutant of *Neurospora crassa* 21

LAWRENCE, M. J. (Birmingham). The control of crossing over in the X-chromosome of *Drosophila melanogaster* 27

FITZGERALD, P. H. (Christchurch). Genetic and epigenetic factors controlling female sterility in *Neurospora crassa* 47

CATCHESIDE, D. G. (Birmingham). Non-disjunction in an *Œnothera* interchange heterozygote 63

HENDERSON, S. ALAN (Birmingham). Temperature and chiasma formation in *Schistocerca gregaria* 77

NEI, MASATOSHI (Japan). The efficiency of haploid methods of plant breeding 95

EDWARDS, A. W. F. (Pavia). Migrational selection 101

NOTES AND COMMENTS :

REID, D. H., and PARSONS, P. A. (Cambridge). Sex of parent and variation of recombination with age in the mouse 107

MATHER, WHARTON B. (Brisbane). Ecological and sexual variation in *Drosophila rubida* inversion polymorphism 109

REVIEWS :

DARLINGTON, C. D. The Genetics of Man. (A review of ten books on Human Genetics) 113

MORAN, P. A. P. The Statistical Processes of Evolutionary Theory . 118

KING, R. C. Genetics 121

BOOKS RECEIVED 122

GENETICAL SOCIETY OF GREAT BRITAIN : Abstracts of Papers . . . 123

PART 2. MAY

HAQUE, ASHRAFUL (Dacca). Differential labelling of *Trillium* chromosomes by H^3-thymidine at low temperatures 129

LAWRENCE, C. W. (Birmingham). Genetic studies on wild populations of *Melandrium*. I. Chromosome behaviour 135

LAWRENCE, C. W. (Birmingham). Genetic studies on wild populations of *Melandrium*. II. Flowering time and plant weight 149

PAGE

DRAPER, G. J. (Oxford). "Epidemics" caused by a late-manifesting gene. Application to scrapie 165

HENDERSON, S. A. (Birmingham). Chiasma distribution at diplotene in a locust 173

GRINDLE, M. (Birmingham). Heterokaryon compatibility in unrelated strains in the *Aspergillus nidulans* group 191

VALEN, LEIGH VAN (London). Introgression in laboratory populations of *Drosophila persimilis* and *D. pseudoobscura* 205

WINGE, HELGA, and CORDEIRO, A. R. (Brazil). Experimental hybrids between *Drosophila willistoni* Sturtevant and *D. paulistorum* Dobzhansky and Pavan from southern marginal populations 215

ZOHARY, D., and IMBER, D. (Jerusalem). Genetic dimorphism in fruit type in *Ægilops speltoides* 223

STADLER, D. R. (Seattle). Observations on the polaron model for genetic recombination 233

REVIEWS:

SHIELDS, JAMES. Monozygotic twins 243

SIMMONDS, N. W. The evolution of the bananas 243

BOOKS RECEIVED 244

PART 3. AUGUST

JINKS, J. L., and GRINDLE, M. (Birmingham). Changes induced by training in *Phytophthora infestans* 245

TILNEY-BASSETT, R. A. E. (Oxford). The structure of periclinal chimeras . 265

RILEY, RALPH, and KEMPANNA, C. (Cambridge). Homœologous nature of the non-homologous meiotic pairing in *Triticum æstivum* deficient for chromosome V (5B) 287

EDWARDS, K. J. R., and COOPER, J. P. (Aberystwyth). The genetic control of leaf development in *Lolium*. II. Response to selection 307

JINKS, J. L., and BROADHURST, P. L. (Birmingham and London). Diallel analysis of litter size and body weight in rats 319

COCK, A. G., and MORTON, J. R. (Edinburgh and Cambridge). Maternal and sex-linked effects on size and conformation in domestic fowl . . 337

SEARLE, S. R. (Cornell). The efficiency of ancestor records in animal selection 351

NOTES AND COMMENTS:

O'DONALD, P. Sexual selection and territorial behaviour . . . 361

BOGDAN, A. V. *Chloris gayana* without anthocyanin colouration . . 364

PARSONS, P. A. Complex polymorphisms where the coupling and repulsion double heterozygote viabilities differ 369

PAGE

REVIEWS :

MULLER, H. J. Studies in Genetics 375

UNITED NATIONS AND WORLD HEALTH ORGANIZATION. The use of vital and health statistics for genetic and radiation studies . . . 375

MERCHANT, D. J., and NEEL, J. V. (Ed.). Approaches to the genetic analysis of Mammalian Cells 377

NORMAN, A. P. (Ed.). Congenital Abnormalities in Infancy . . 378

BOOKS RECEIVED 380

GENETICAL SOCIETY OF GREAT BRITAIN : Abstracts of Papers . . . 381

PART 4. NOVEMBER

STRICKBERGER, M. W. (St Louis). Comparative fitness of experimental populations of *Drosophila pseudoobscura* 385

GRINDLE, M. (Birmingham). Heterokaryon compatibility of closely related wild isolates of *Aspergillus nidulans* 397

JINKS, J. L., and GRINDLE, M. (Birmingham). The genetical basis of heterokaryon incompatibility in *Aspergillus nidulans* 407

WOLSTENHOLME, D. R., and THODAY, J. M. (Cambridge). Effects of disruptive selection. VII. A third chromosome polymorphism 413

SVED, J. A. (Adelaide). Modes of tetrad formation in tetrasomic inheritance 433

O'DONALD, P. (Bangor). Sexual selection for dominant and recessive genes . 451

GOODHART, C. B. (Cambridge). "Area effects" and non-adaptive variation between populations of *Cepæa* (*mollusca*) 459

CAIN, A. J., and CURREY, J. D. (Oxon.). The causes of area effects . . 467

RILEY, R., and CHAPMAN, V. (Cambridge). The effects of the deficiency of chromosome V (5B) of *Triticum æstivum* on the meiosis of synthetic amphiploids 473

TILNEY-BASSETT, R. A. E. (Oxon). Genetics and plastid physiology in *Pelargonium* 485

HEWITT, G. M. (Birmingham). A tetrasomic mosaic in the germ line of *Chorthippus parallelus* 505

GIBSON, J. B., and THODAY, J. M. (Cambridge). Effects of disruptive selection. VIII. Imposed quasi-random mating 513

CROWE, L. K. (Oxon). Competition between compatible nuclei in the establishment of a dikaryon in *Schizophyllum commune* 525

NOTES AND COMMENTS :

MANDEL, S. P. H. A note on the initial progress of new genes . . 535

SINGH, D. N., and GODWARD, M. B. E. Cytological studies in the *Gramineæ* (II) 538

PAGE

TATCHELL, JEAN A. H. Mutual reduction of dominance involving three loci in *Mus musculus* 540

TILNEY-BASSETT, R. A. E. Selection against the variegated genotype in *Barbarea vulgaris* 543

REVIEWS :

HOWELLS, W. (Ed.). Ideas on Human Evolution 546

AMERICAN DENTAL ASSOCIATION. Genetics and Dental Health . . 547

NEEL, JAMES V. Changing Perspectives on the Genetic Effects of Radiation 547

BURDETTE, WALTER J. (Ed.). Methodology in Mammalian Genetics . 549

GENETICAL SOCIETY OF GREAT BRITAIN : Abstracts of Papers . . . 551

INDEX OF SUBJECTS 556

INDEX OF AUTHORS 558